FIG. 1

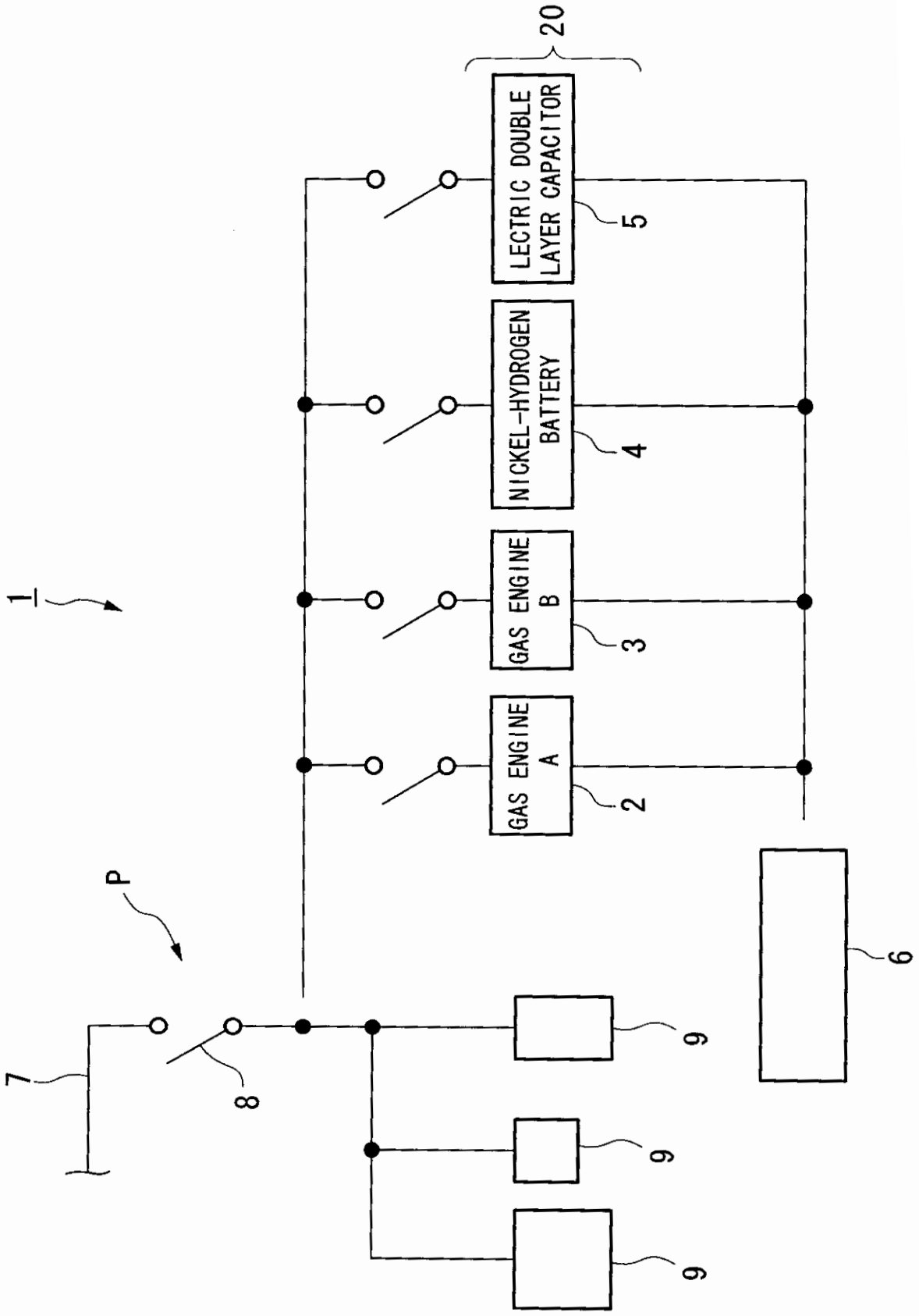

1
P
GAS ENGINE A
2
GAS ENGINE B
3
NICKEL-HYDROGEN BATTERY
4
LECTRIC DOUBLE LAYER CAPACITOR
5
20
6
7
8
9
9
9

FIG. 2

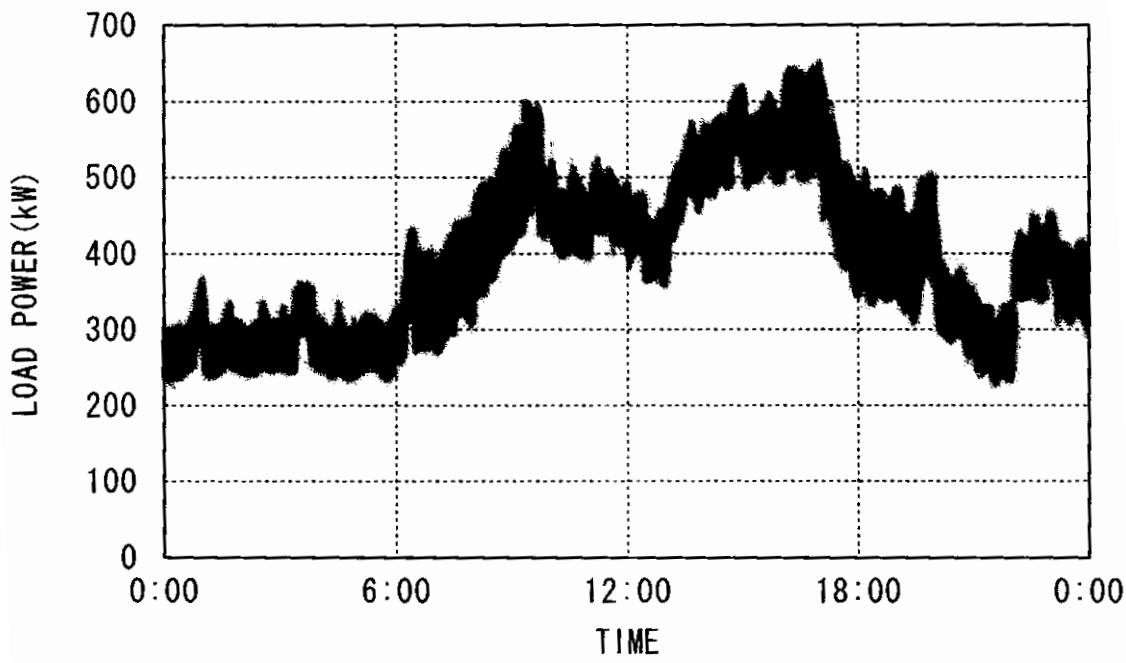

700
600
500
400
300
200
100
0
LOAD POWER(kW)
0:00
6:00
12:00
18:00
0:00
TIME

FIG. 3

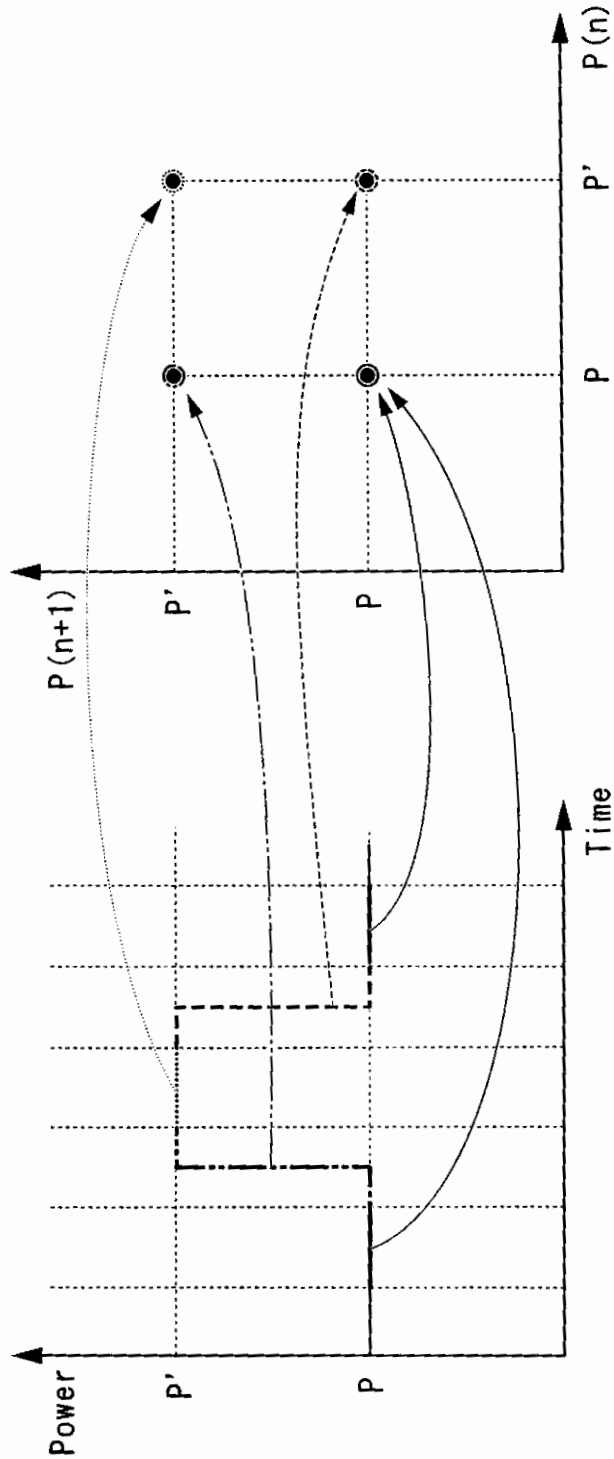


FIG. 4

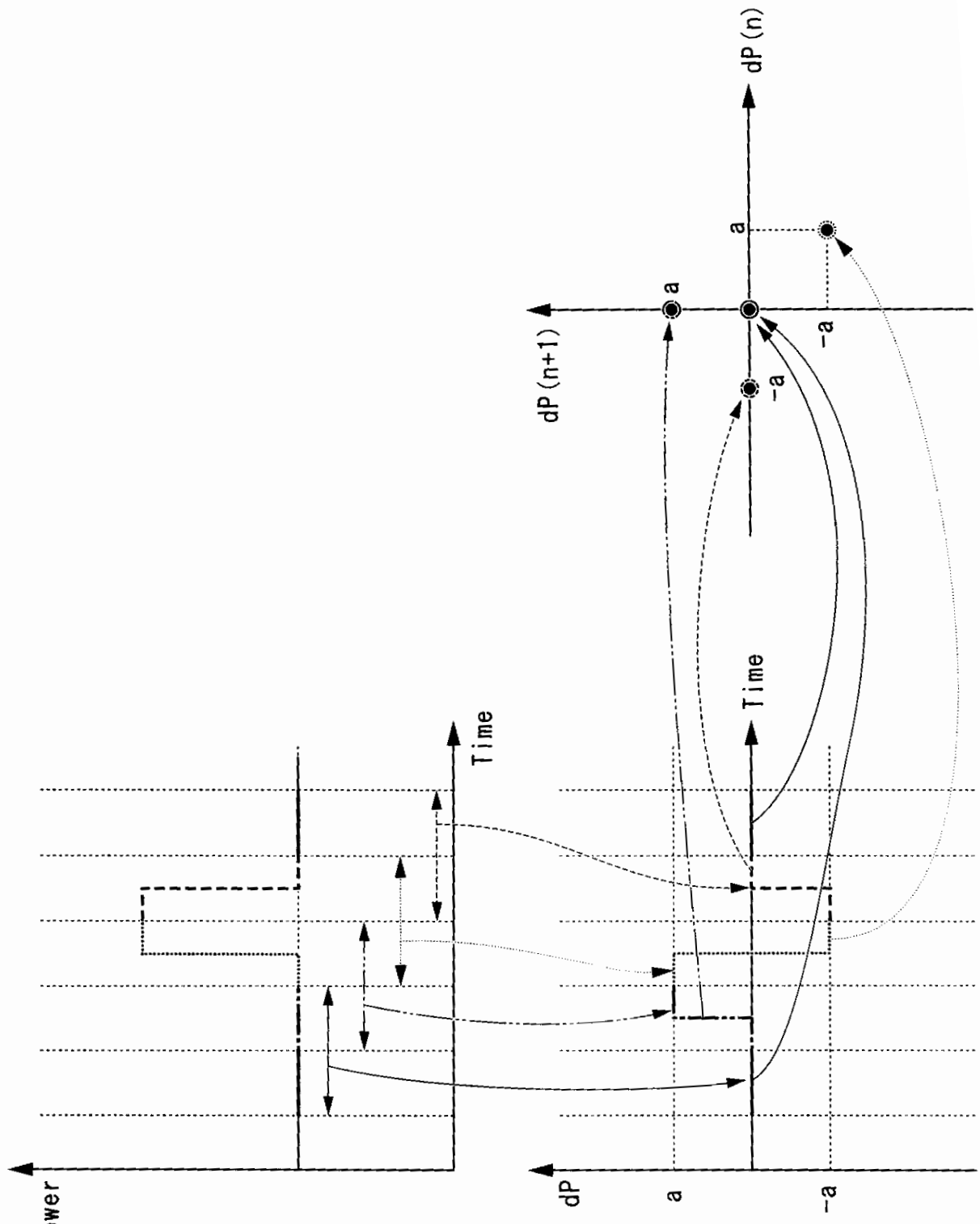


FIG. 5A

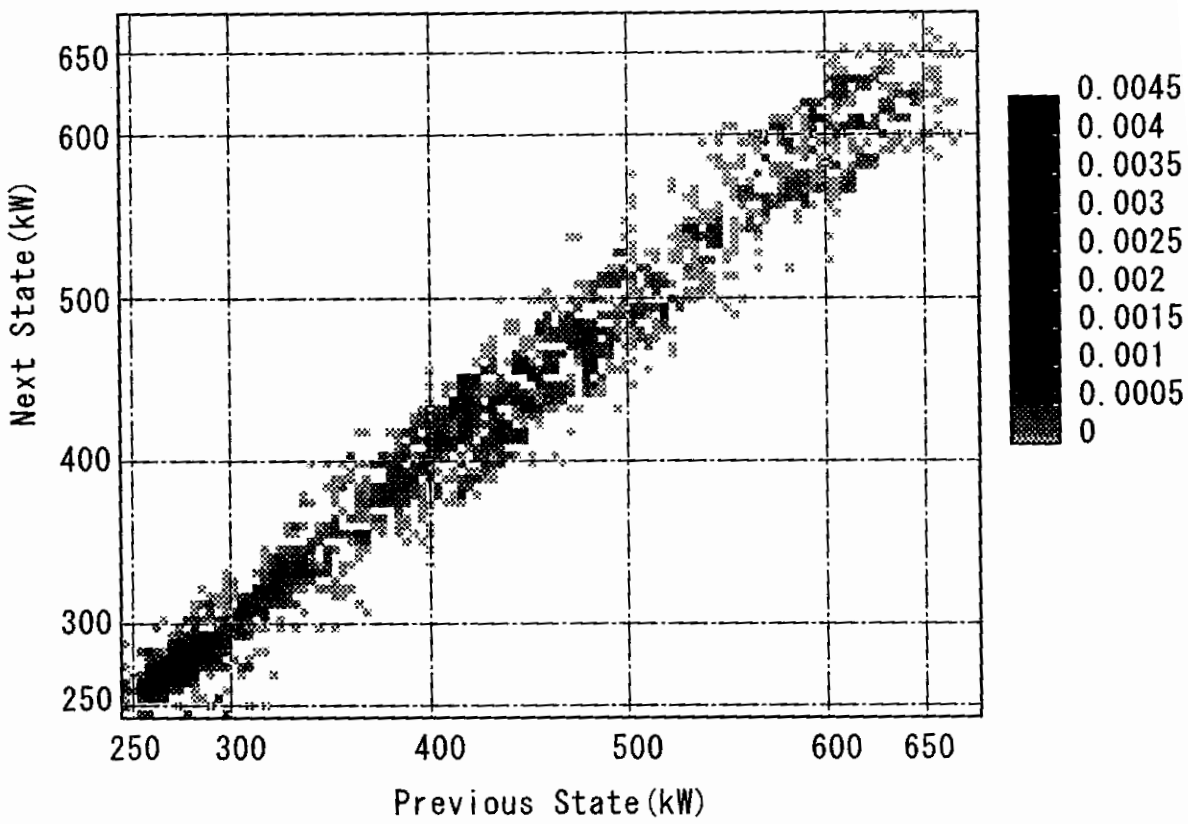

650
600
500
400
300
250
Next State(kW)
250
300
400
500
600
650
Previous State(kW)
0.0045
0.004
0.0035
0.003
0.0025
0.002
0.0015
0.001
0.0005
0

FIG. 5B

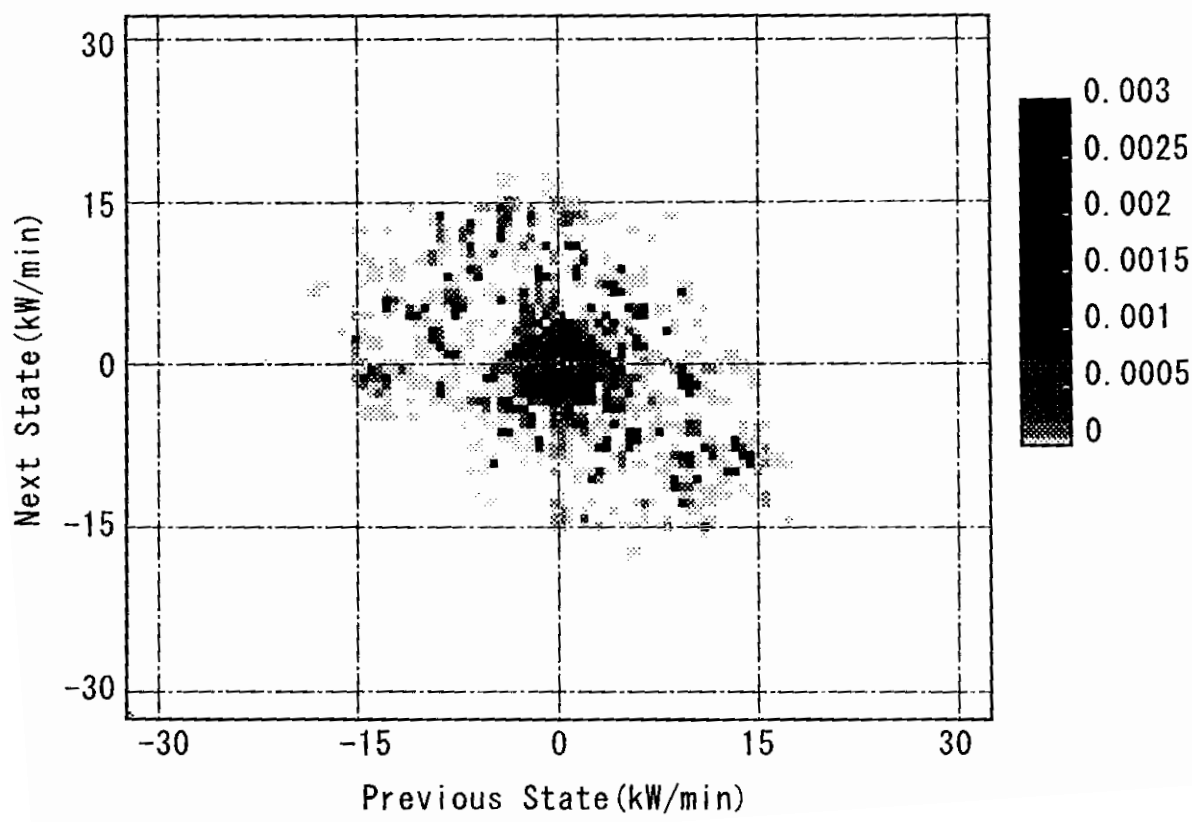

30
15
0
-15
-30
Next State(kW/min)
-30
-15
0
15
30
Previous State(kW/min)
0.003
0.0025
0.002
0.0015
0.001
0.0005
0

FIG. 6A

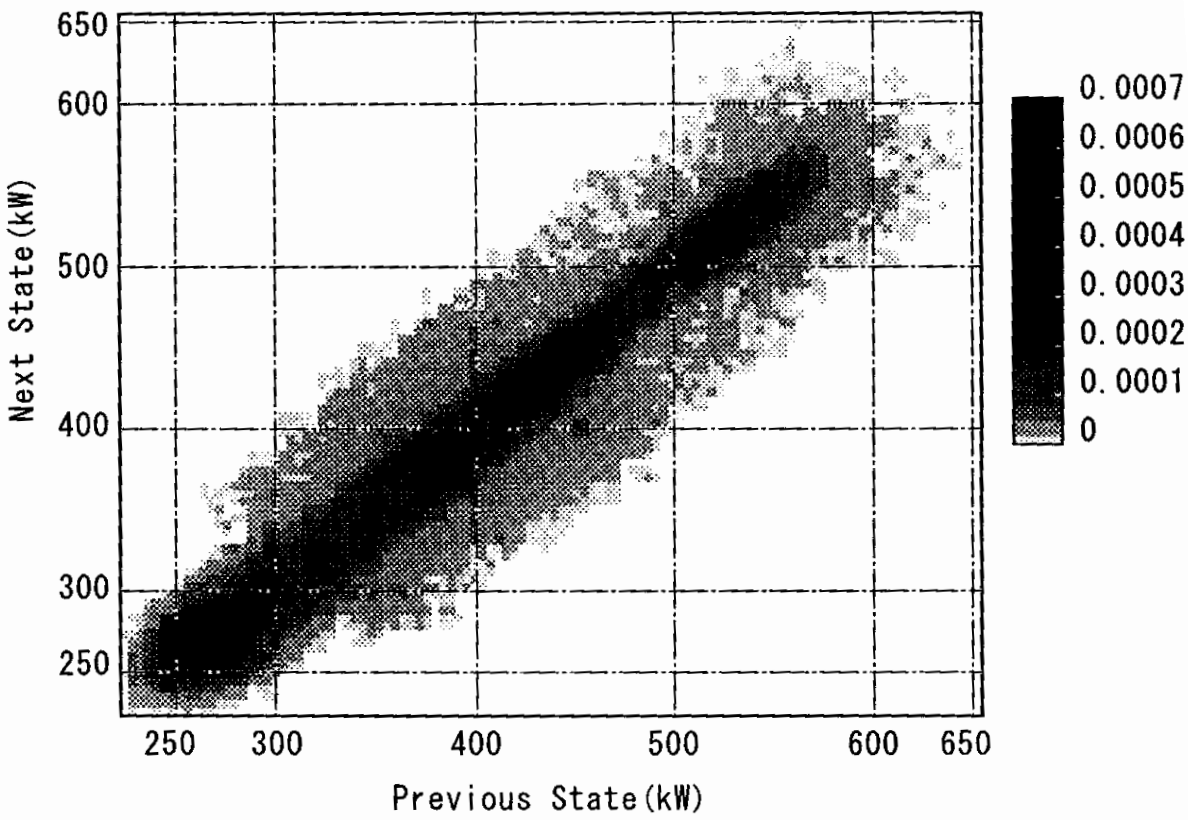

650
600
500
400
300
250
Next State(kW)
250
300
400
500
600
650
Previous State(kW)
0.0007
0.0006
0.0005
0.0004
0.0003
0.0002
0.0001
0

FIG. 6B

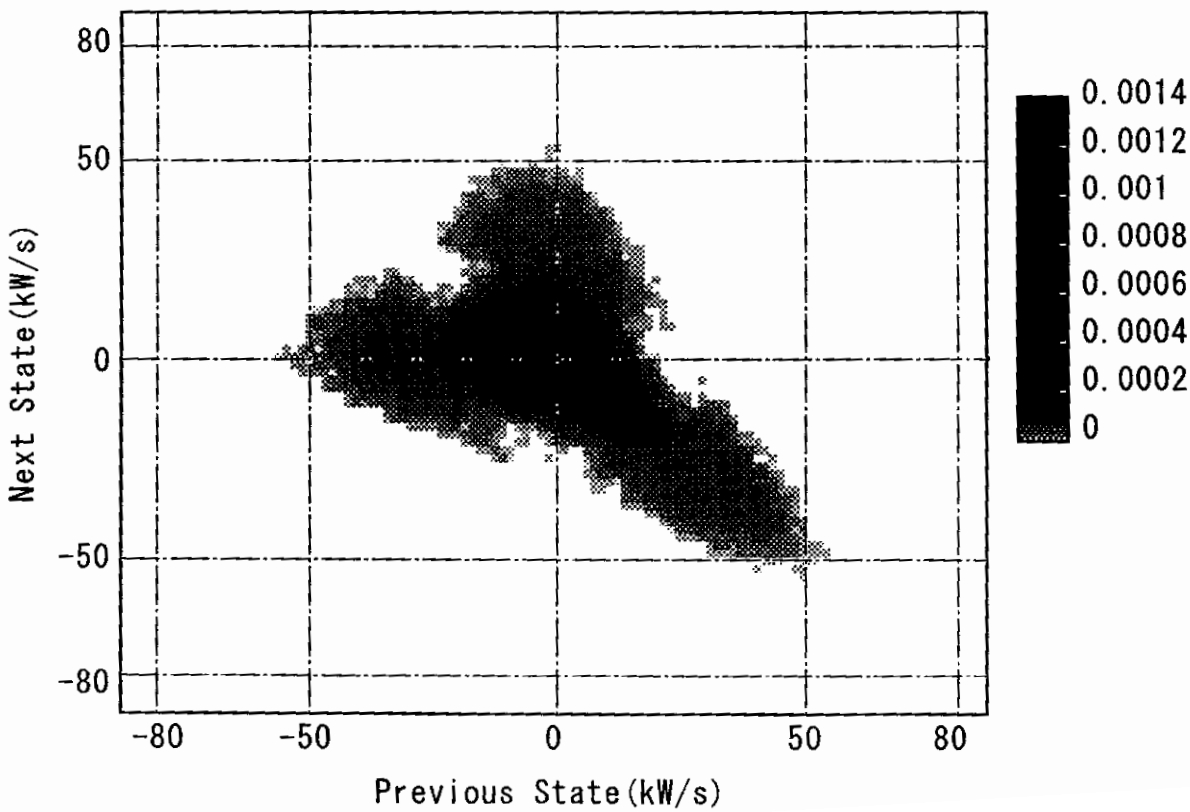

80
50
0
-50
-80
Next State(kW/s)
-80
-50
0
50
80
Previous State(kW/s)
0.0014
0.0012
0.001
0.0008
0.0006
0.0004
0.0002
0

FIG. 7

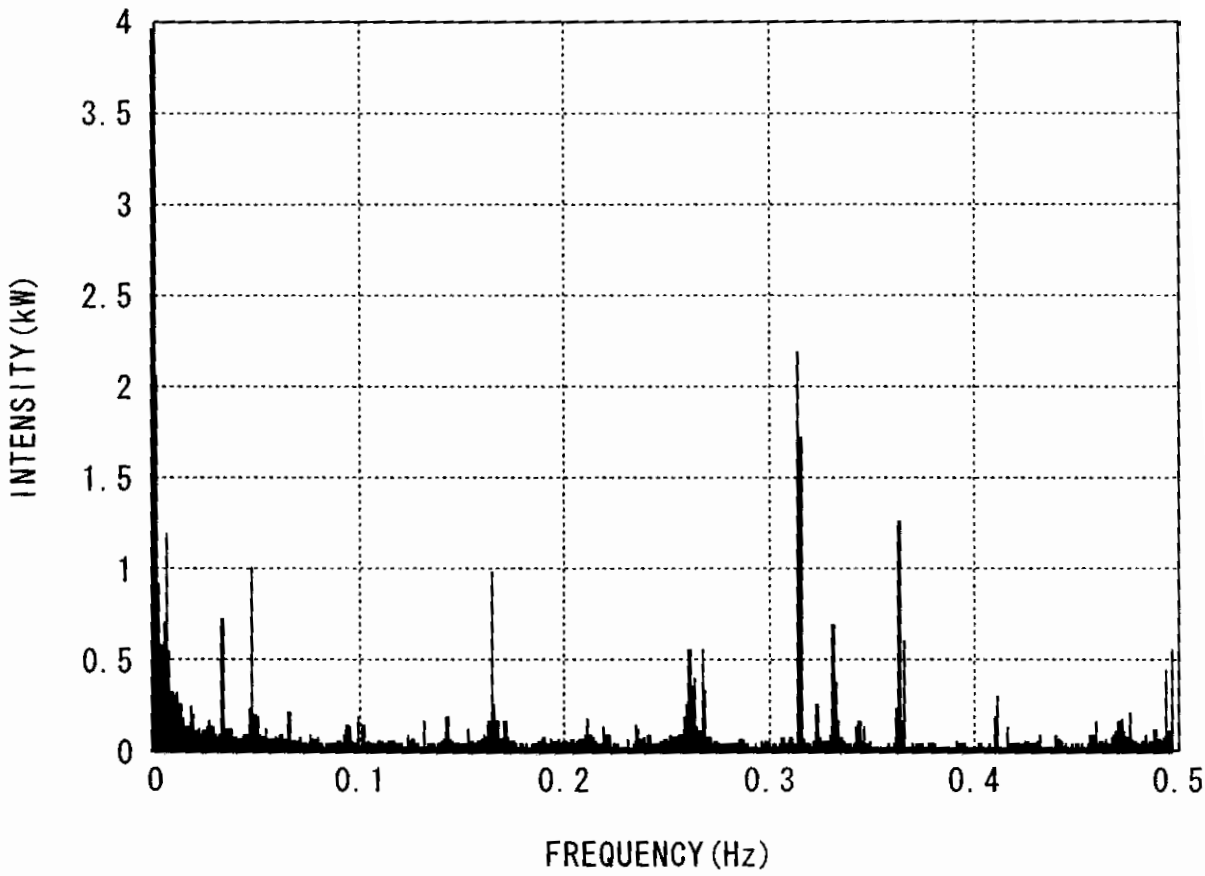


FIG. 8A

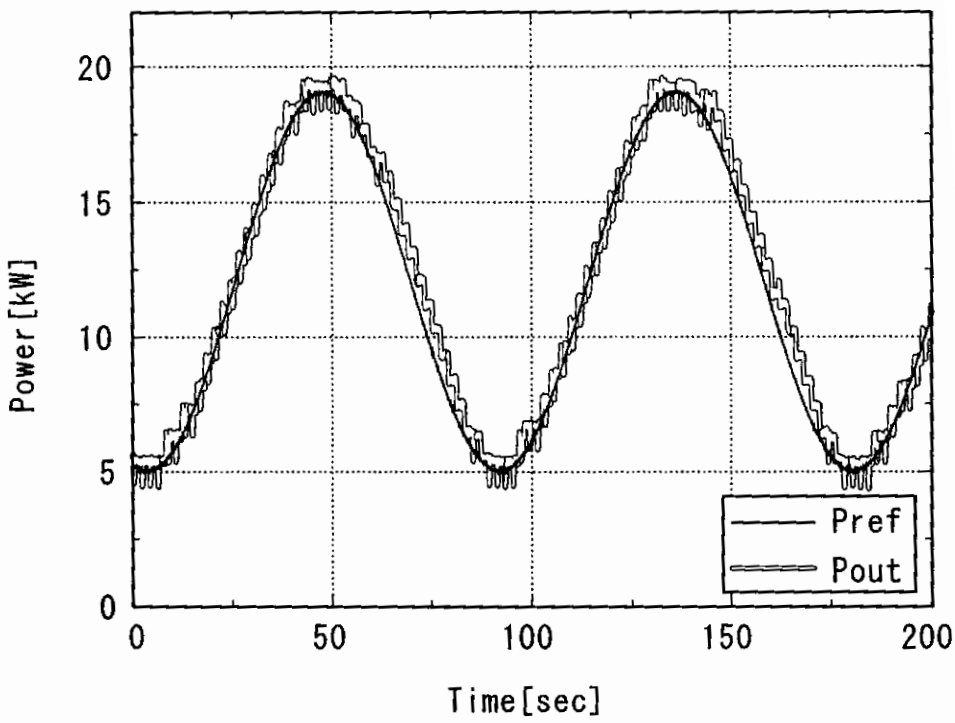

20
15
10
5
0
Power [kW]
0
50
100
150
200
Time [sec]
Pref
Pout

FIG. 8B

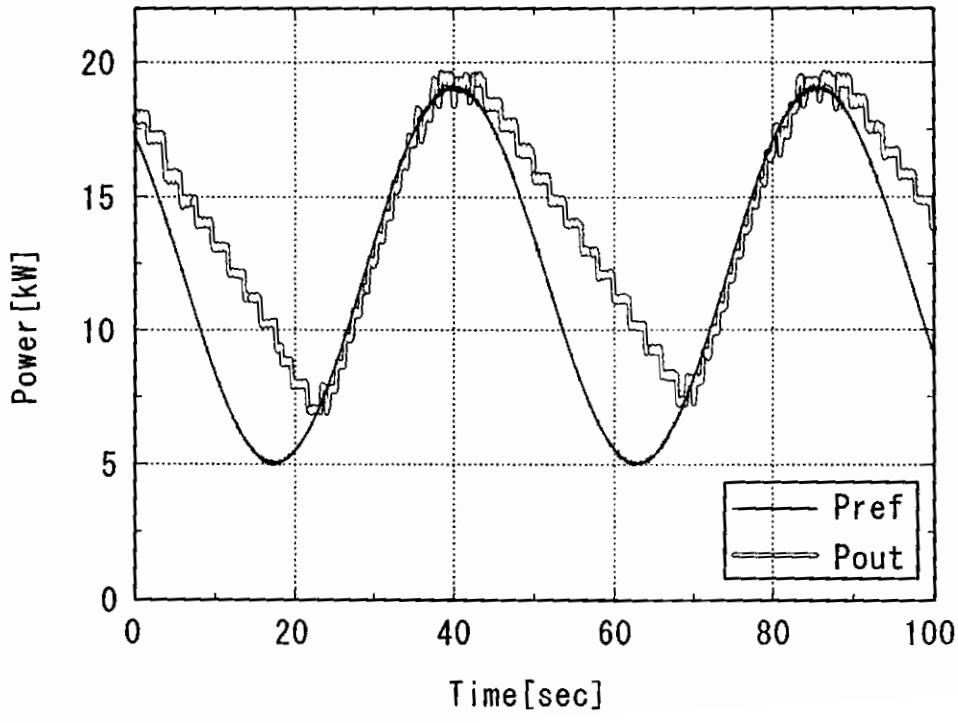

20
15
10
5
0
Power [kW]
0
20
40
60
80
100
Time [sec]
Pref
Pout

FIG. 9A

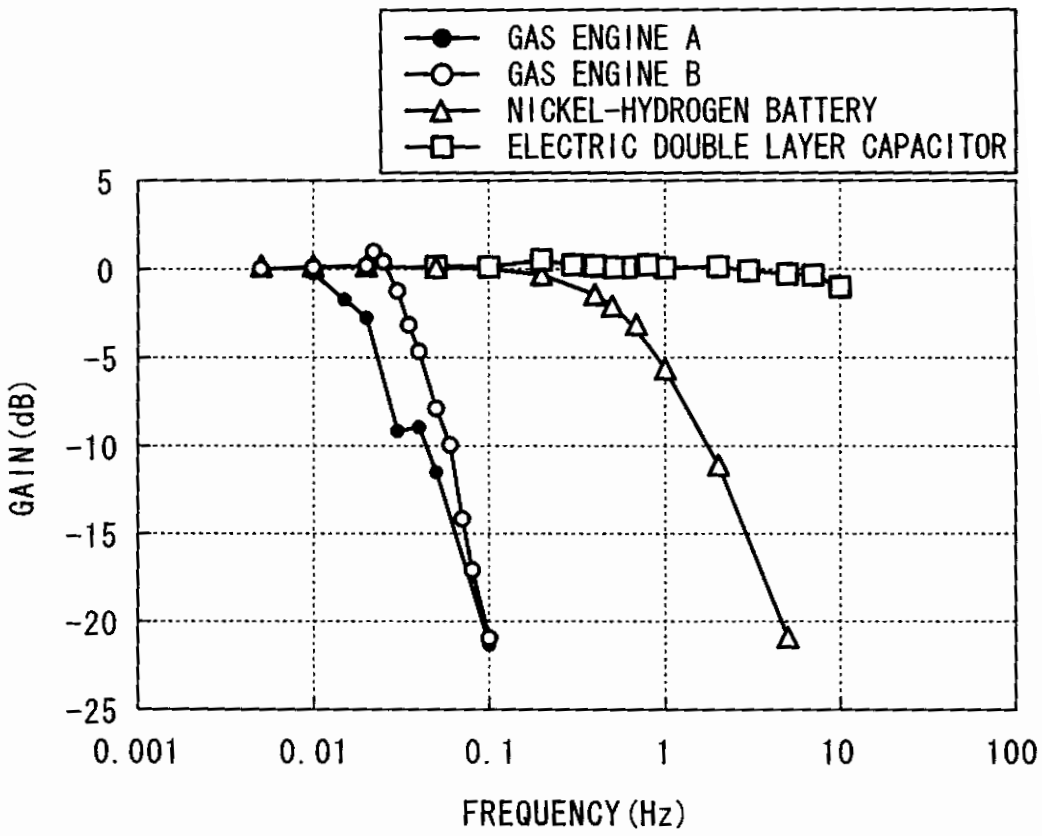

GAS ENGINE A
GAS ENGINE B
NICKEL-HYDROGEN BATTERY
ELECTRIC DOUBLE LAYER CAPACITOR
5
0
-5
-10
-15
-20
-25
GAIN(dB)
0.001
0.01
0.1
1
10
100
FREQUENCY(Hz)

FIG. 9B

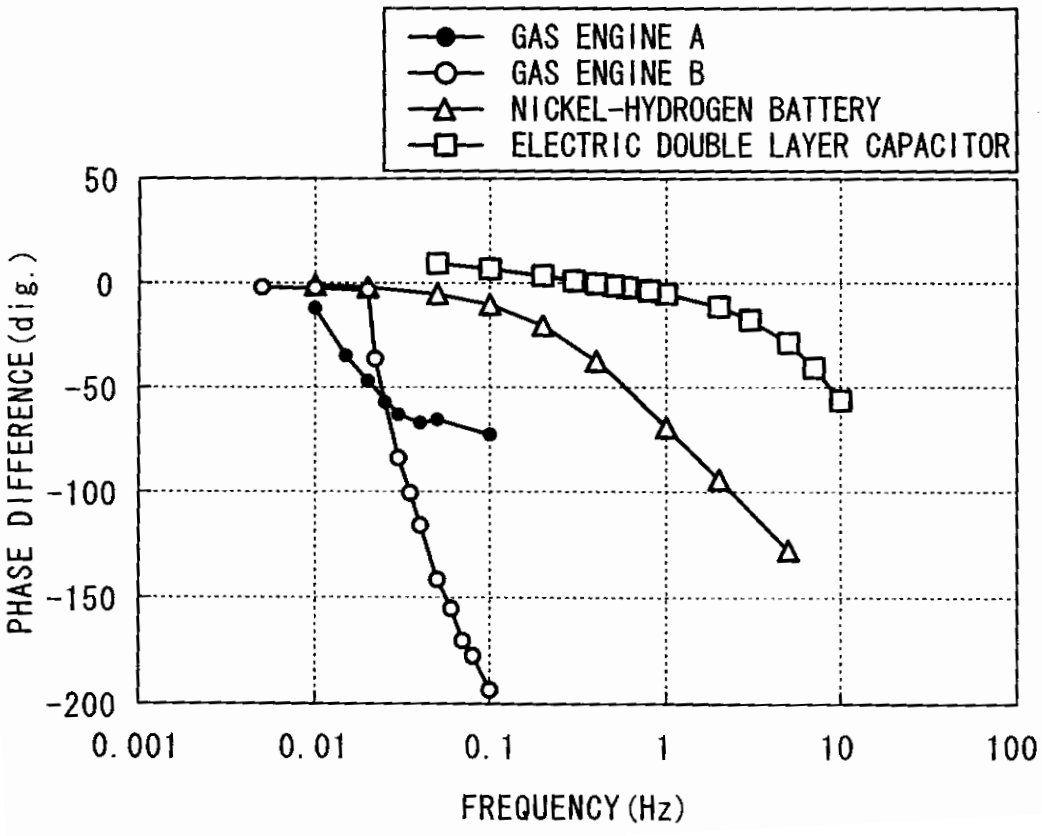

GAS ENGINE A
GAS ENGINE B
NICKEL-HYDROGEN BATTERY
ELECTRIC DOUBLE LAYER CAPACITOR
50
0
-50
-100
-150
-200
PHASE DIFFERENCE(dig.)
0.001
0.01
0.1
1
10
100
FREQUENCY(Hz)

FIG. 10

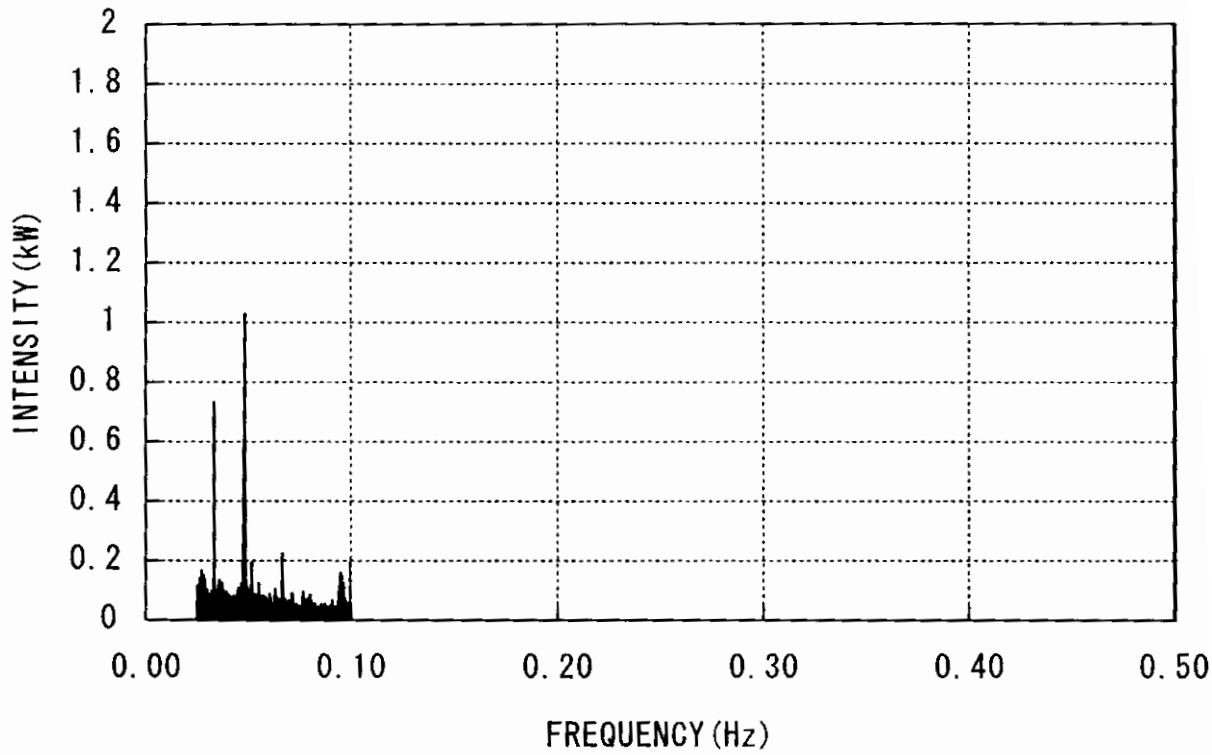

2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
INTENSITY (kW)
0.00
0.10
0.20
0.30
0.40
0.50
FREQUENCY (Hz)

FIG. 11A

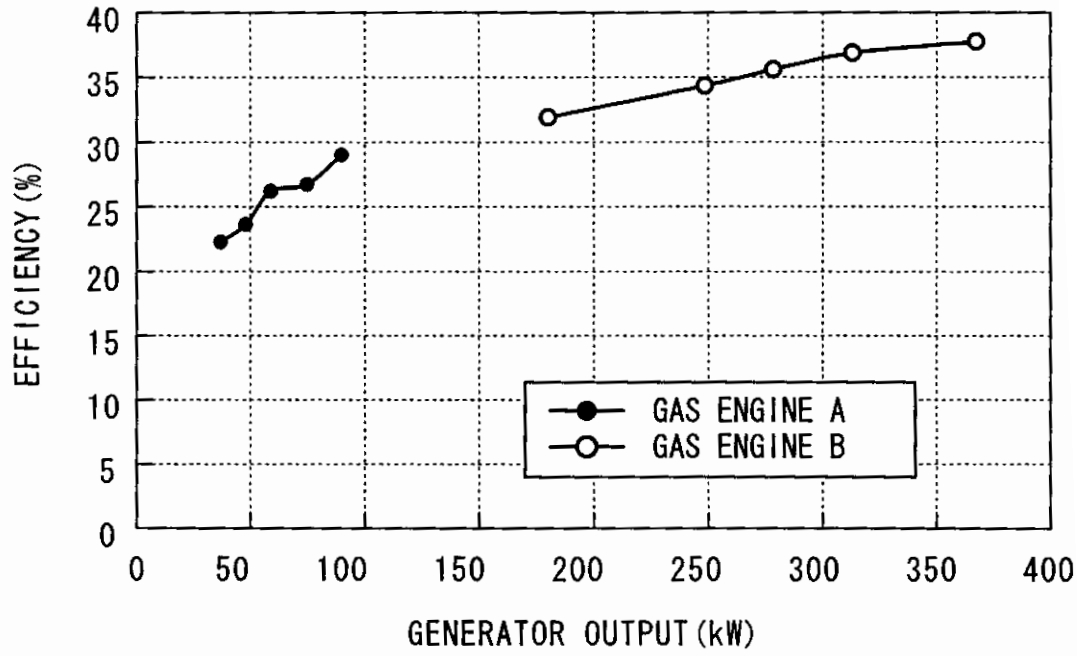


FIG. 11B

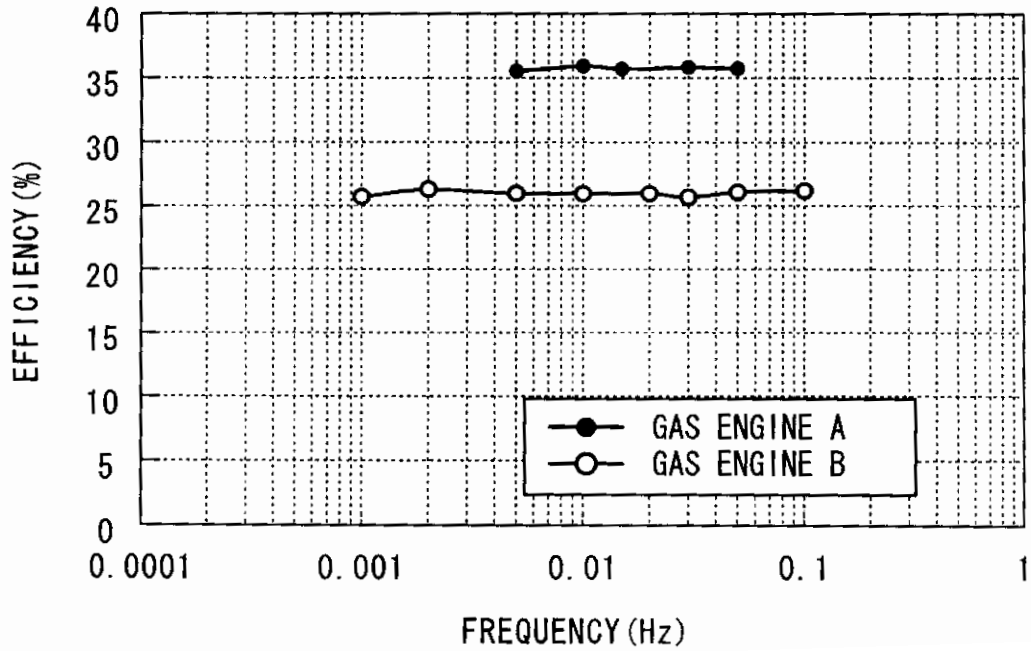


FIG. 12A

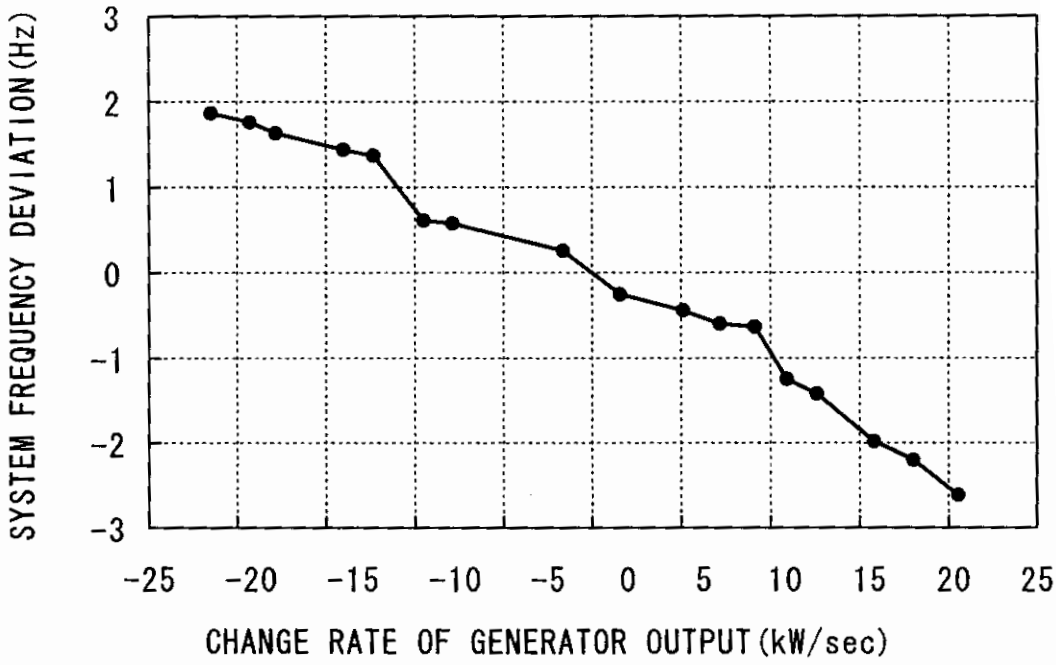


FIG. 12B

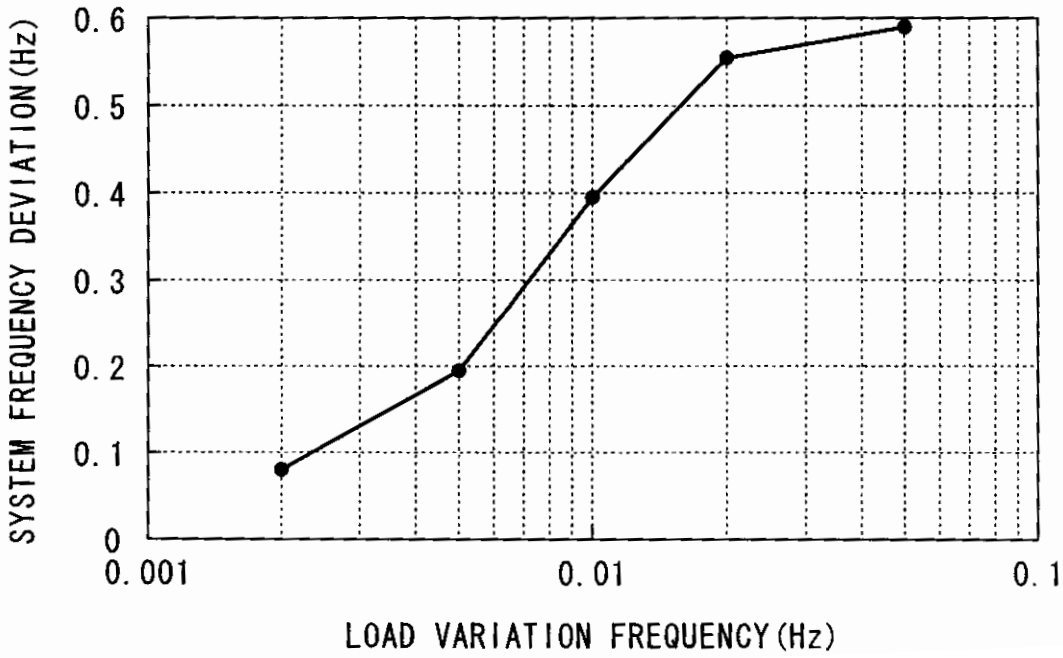
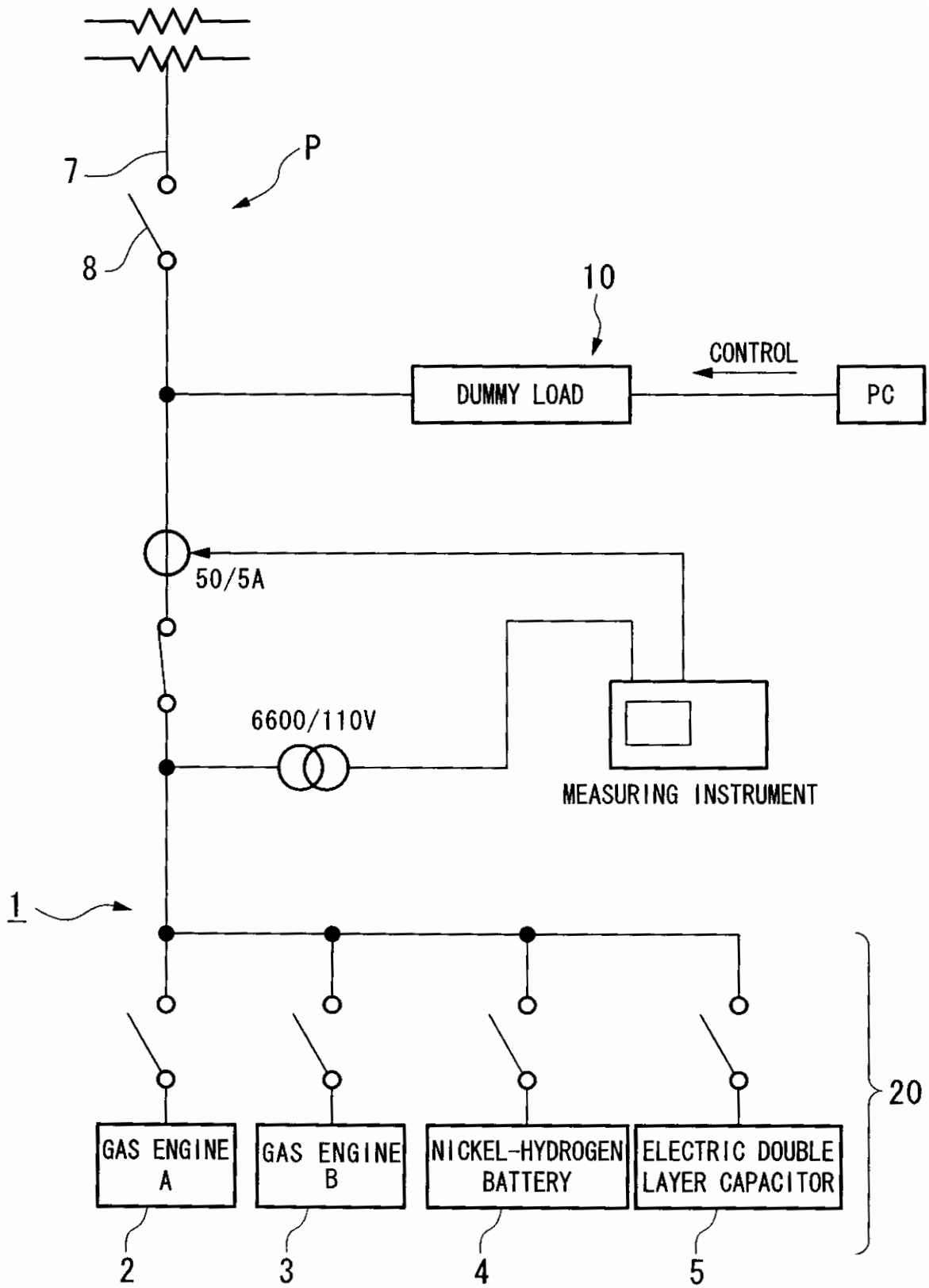


FIG. 13


7
P
8
10
CONTROL
DUMMY LOAD
PC
50/5A
6600/110V
MEASURING INSTRUMENT
1
GAS ENGINE A
GAS ENGINE B
NICKEL-HYDROGEN BATTERY
ELECTRIC DOUBLE LAYER CAPACITOR
20
2
3
4
5